DOCUMENT RESUME

ED 066 181 LI 003 816

AUTHOR	Vaughn, William J.; Dunn, J. D.
TITLE	A Model for Conducting Job Satisfaction Research in On-Going Organizations.
SPONS AGENCY	North Texas State Univ., Denton.
PUB DATE	72
NOTE	37p.; (0 References); This is the first of a series of articles reporting results of the North Texas State University Research Studies in Job Satisfaction
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Employee Attitudes; Industrial Relations; *Job Satisfaction; Librarians; Libraries; Management; *Measurement Techniques; Models; *Research; *University Libraries; *Work Environment
IDENTIFIERS	Interuniversity Council; IUC; JDI; *Job Descriptive Index; On Going Organizations

ABSTRACT

Job satisfaction is the feeling an employee has about his pay, his work, his promotion opportunities, his coworkers, and his supervisor. The model for conducting job satisfaction research suggested in this study gives specific attention to: (1) how job satisfaction can be measured; (2) the major pitfalls likely to be encountered by those who conduct such research and (3) how job satisfaction data can be obtained, analyzed and interpreted by management. The universe of this study was comprised of six libraries of the Interuniversity Council (IUC). The Job Descriptive Index (JDI) was used to measure job satisfaction in the areas of pay, promotion, supervision, work, and people on the job. The ultimate goal of job satisfaction research is two-fold: (1) to increase the understanding of employees and their supervisors in regard to the reasons underlying current management policies and practices and (2) to increase long-term understanding of the meanings and implications for managerial policy and practice of basic research in the field of job satisfaction. (Related studies are: LI003817 through 003821). (Author/NH)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
W. J. Vaughn
J. D. Dunn
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

ED 066181

A MODEL FOR CONDUCTING JOB SATISFACTION RESEARCH IN ON-GOING ORGANIZATIONS

by

William J. Vaughn, BSME, MBA, JD, Ph.D.

and

J. D. Dunn, BA, MBA, Ph.D.

Copyrighted 1972

North Texas State University

Denton, Texas 76201

LI 003 816

A MODEL FOR CONDUCTING JOB SATISFACTION RESEARCH IN ON-GOING ORGANIZATIONS*

In this study a model for conducting job satisfaction research in on-going organizations is suggested. Specific attention is given to the following questions: 1) How can job satisfaction be measured? 2) What are the major pitfalls likely to be encountered by those who conduct such research? 3) How can job satisfaction data, once obtained, be analyzed and interpreted by management?

Job satisfaction is the feeling an employee has about his pay, his work, his promotion opportunities, his coworkers, and his supervisor. An employee's feelings about each of these items can be indexed; a numerical value can be assigned to each; and a grand total can be computed. From a managerial perspective, however, it is advisable to examine each element of satisfaction separately. As this study will suggest, the determinants of each element of satisfaction appear to be different, and the consequences also appear to be different.

An example will illustrate this concept: Assume that satisfaction with pay can be measured on a scale of values such as that in Figure 1.

Figure 1
A Hypothetical Scale for Measuring Job Satisfaction

Further assume that a particular employee's satisfaction with pay is indexed and is found to be -5. Satisfaction with supervision, on the other hand, let us say, is found to be +5. By adding these two values one would arrive at a zero global measure. From a managerial perspective

*This is the first of a series of articles reporting results of the North Texas State University Research Studies in Job Satisfaction. This research is financed by a North Texas State University Faculty Research Grant made to Dr. J. D. Dunn. For technical assistance the authors are deeply indebted to Richard Harris, Jerry Waldon, Frank Walker, and Steve Minnis of the NTSU Computer Center.

does it make sense to do this? Are those matters which cause satisfaction with pay different from those matters which cause satisfaction with supervision? Very probably they are. Cost-of-living, going wage rates in a particular labor market, the expectations, or aspirations, of an employee, and wage structures within an organization are a few examples, drawn from a list of many factors, that influence feelings about pay. The technical ability of a supervisor, his human relations skills, and his administrative ability are a few examples of matters which influence satisfaction with supervision. By following a similar process of reasoning one could catalog some of the determinants of each of the other discriminable dimensions of job satisfaction, i.e. promotion, work itself, and feeling about coworkers. If these factors each have a unique set of determinants, then each aspect of job satisfaction should be indexed separately.

Are the consequences of employee satisfaction with pay, promotion, supervision, work, and coworkers also likely to be different? Again, the answer is, "probably so." The above example can be used again to illustrate why this is true. The negative feelings about pay expressed by the employee in the above example tend to cause him to have a propensity to leave the organization. His positive feelings about supervision, on the other hand, tend to counteract this feeling about pay. His positive feeling about supervision tends to keep him in the organization. In fact, he may feel that his supervisor will very soon do something about his pay. If he believes strongly that a pay increase is likely to come soon, his feelings about pay will perhaps have no overt behavioral consequences at all.

After making this observation, however, it is important to point out that indexing the satisfaction that an employee has about his job and cataloging the determinants and consequences of these feelings is a complex process. Before undertaking such a project, management would do well to consider these questions: How can employee satisfaction with a job be measured? Is there a relation between managerial performance and employee satisfaction? Is there a relation between employee satisfaction and employee productivity? What influence does employee satisfaction have upon organizational effectiveness? The hypothesis upon which the research reported in this study was built is shown in Figure 2.

Figure 2
The Theoretical Model

Managerial performance (see Figure 2) does influence employee job satisfaction. As mentioned earlier, one discriminable aspect of employee satisfaction is the feeling an employee has about his supervisor. Managerial performance also has a direct influence upon employee performance (productivity). How this is done is not clear, but in Figure 2 the idea is illustrated by the arrow moving directly from managerial performance to employee productivity.

Some aspects of managerial performance, for example key decisions such as those concerning plant expansion and output levels, impinge directly upon organizational effectiveness. Evidence to support this assumption is seen in the widespread practice of removing the managerial cadre when an organization does not function properly.

Organizational effectiveness, as the term is used here, is the extent to which an organization is accomplishing its objectives without depleting its human, financial, and material resources. An organization

is a group of people in a structured situation working together toward a specified goal. Organizations may be analyzed by using either a macro or micro level of analysis. In large organizations it is often advisable to study the job satisfaction of a part of the organization rather than the whole.

The influence of employee productivity upon organizational effectiveness is direct and needs no discussion for purposes of this study. The influence of employee satisfaction upon organizational effectiveness, in contrast, is not so readily seen. Correlations between satisfaction and performance (productivity) have been found to be low in many studies, suggesting that one does not cause the other. On the other hand correlations between employee satisfaction and turnover have been found to be high and positive. Dissatisfied employees may be exceedingly high in productivity while they are on the job; however, often dissatisfied employees adopt either a "fight" or "flight" pattern of behavior. They leave the organization if alternatives are available, or they stay with the organization and "fight" it. "Fight" patterns of behavior are illustrated by the strike, slowdown, or by more subtle means such as the failure to commit one's maximum efforts in support of the organization's goals.

The remaining portion of this paper will deal with the subject of employee satisfaction. How can it be measured, or indexed? What are some of the pitfalls likely to be encountered in the process of measuring satisfaction? Once obtained, how can job satisfaction data be analyzed?

The Sample Studied

The universe of this study was comprised of six organizations, specifically six university libraries located within a fifty mile radius (roughly) of the center of the Dallas-Fort Worth metropolitan region. The research effort was sponsored by six libraries of the Interuniversity Council, an organization comprised of fourteen universities. The following libraries participated in this study: University of Texas at Arlington, North Texas State University, Southern Methodist University, Texas Christian University, University of Dallas, and East Texas State University. The number of full-time employees in each of these libraries who participated in this study are shown in Figure 3A. As Figure 3B reveals, the libraries which

Figure 3A
Characteristics of Sample Organizations
Comprising the Universe of This Study

Figure 3B
Interuniversity Council of The North Texas Area

participated in this study are corporate members of the IUC. The location of each of these libraries is also shown in Figure 3B.

How Can Employee Satisfaction Be Indexed?

Many instruments for measuring job satisfaction have been devised. When selecting an instrument for measuring job satisfaction, the following criteria may be used:

1. It should index the several dimensions of job satisfaction rather than an "over-all" (global) dimension.

2. It should be applicable to a wide variety of jobs.

3. It should be sensitive to variations in attitude.

4. The instrument used should be of such a nature (interesting, realistic, and varied) that the scale will evoke cooperation from both management and employees.

5. The index should be reliable.

6. The index should be valid.

7. The index should be brief and easily scored.

8. Normative data should be available.

In this study the Job Descriptive Index (JDI) was used. The JDI meets all of the above criteria.* The JDI measures job satisfaction in the areas of pay, promotion, supervision, work, and people on the job. Each of the five scales are presented on a separate page. The instructions for each scale ask the subject to put a "Y" beside an item if the item describes the particular aspect of his job (i.e. work, pay, etc.), "N" if the item does not describe that aspect, or "?" if he cannot decide. A completed JDI (hypothetical) is shown in Figure 4.

Figure 4
The JDI

*For detailed information about the JDI see: Patricia Cain Smith, Lorne M. Kendall, Charles L. Hulin, The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes, Chicago: Rand McNally & Company, 1969. For information comparing the JDI with other instruments for measuring satisfaction, see: John P. Robinson, Robert Athanasiou, Kendra B. Head, Measures of Occupational Attitudes and Occupational Characteristics (Appendix A to Measures of Political Attitudes), Survey Research Center, Institute for Social Research, University of Michigan, February, 1969, p. 104.

Pitfalls Likely to be Encountered When Measuring Job Satisfaction

One of the most challenging problems facing those conducting job satisfaction research in an on-going organization is that of gaining an employee's true expression of his feelings. It is doubtful if this can ever be done by an organization without the aid of assistance from someone outside the organization whom the employees feel they can trust. Is an employee likely to give his true feelings about his supervisor if he thinks his supervisor will be able to identify his response? Obviously, not. An employee's response, however, must be identified if job satisfaction research is to be significantly advanced. For example, age seems to have a predictable influence upon job satisfaction. Generally, the young are more dissatisfied than the old. In addition to age, it is important to catalog other characteristics of each respondent, such as level in the organizational hierarchy, sex, salary, and educational background. The problem, then, is one of matching a respondent's scores on pay, promotion, etc., with his age, sex, etc., while, at the same time, protecting his anonymity so that he will give a truthful response.

In the immediate study fifty-five variables were used. Before the JDI was distributed to an individual he was assigned a code number, and his code was placed upon the JDI before it was mailed to him. Each employee's code was also placed upon a master work sheet. Alongside this number his age, sex, salary, educational level, and so on were placed. Thus, to assure anonymity, a code number rather than a name was used to identify the data for each respondent. Each individual was mailed his coded JDI form. A letter from the top manager in the organization accompanied the JDI. This letter explained

the project and asked the respondent to return his completed JDI to the office of the top manager in a sealed envelope. The packet for each library containing all the JDI's was then forwarded to the research director for scoring, analysis, and interpretation.

In addition to age, sex, position level, etc., there are other important stratification variables. For example, the state of employee satisfaction in major departmental groupings is oftentimes information desired by management. An organization analysis must be made before information such as this can be collected. In this study, a complete organization analysis was conducted for only one of the organizations. The brief organization chart shown in Figure 5 is sufficient to reveal

Figure 5
Organization Chart of Library X

the nature of the problem. Note that this library contains two major organizational units: Division A and Division B Each of these "organizations" are made up of other departmental groupings. It is essential for the structure of an organization to be identified before the job satisfaction study is launched. Otherwise, some of the data collected may not be of value. For example, assume that it is desirable to have information about the feelings of the employees in Department A about their supervisor. When filling out the JDI each respondent should have his own immediate supervisor in mind. If organizational relationships are not clearly defined and recognized by all employees, then it is possible that some employees will rate their immediate supervisor while others will rate a higher level supervisor. If turnover in an organization is high, some employees may not even know who their supervisor is.

In summary, then, there are two central problems facing those conducting job satisfaction research: 1) the problem of protecting the

anonymity of each respondent, and 2) the problem of identifying the structure of the organization so that valid information may be collected and, once collected, can be grouped by major departmental categories. Which grouping to use is simply a managerial decision that will be influenced by the uses to be made of the data once it is collected.

How Can Job Satisfaction Data Be Analyzed?

Figures 6A, 6B, 7A, and 7B present an analysis of the JDI data

Figure 6A
Comparative Analysis of Job Satisfaction in Six Libraries, Using Library Subgrouping As The Principle of Stratification

Figure 6B
Comparative Analysis of Job Satisfaction in Six Libraries, Using the Six JDI Dimensions As The Principle of Stratification

Figure 7A
Comparative Analysis of Job Satisfaction in Six JDI (Component) Categories, Using Library X Departments as the Principle of Stratification

Figure 7B
Comparative Analysis of Job Satisfaction In Six Departments Of Library X, Using JDI (Component) As The Principle Of Stratification

in terms of the relative numbers of employees in each of the six organizations who are satisfied with various aspects of their jobs. These four figures deal essentially with the same set of data and should be examined coetaneously.

Library D's overall level of job satisfaction was greater than that of the other libraries. To picture this fact, the data in Figure 6A is arranged in descending order. By examining the data closely, the relative strengths and weaknesses of each participating library in the IUC Council can be inferred.

Library D's employees show a unique pattern of satisfaction. Satisfaction is high in the areas of supervision, pay, and work. The numbers of employees satisfied with people, promotion, and total is somewhat less.

Library C's pattern of job satisfaction reveals at least three job dimensions whose density functions indicate that job satisfaction levels are depressed within these categories. These are the categories of pay, promotion, and people. The management of Library C may want to direct its attention to the reasons contributing to this configuration of the data.

Library F's pattern (Figure 6A) raises the question of why more employees are satisfied with promotion and people, and why less employees are satisfied with pay, supervision, and work. Only the management of Library F is in a position to explore further why this situation exists and what to do about it.

Library A's relative strengths appear to lie in the areas of promotion and people. It should be kept in mind that the comparative analysis of the job satisfaction data is based upon the numbers for all six IUC Libraries. Hence, the percentage figures shown in Figure 6A, of necessity, pertain to the composite means of the JDI categories for all six libraries. For example, 65.94% of the employees in Library A scored above the mean promotion score of 12.2687. This latter figure reflects the mean (simple arithmetical average) of the promotion scores for the 265 employees comprising the total library sample of employees. Interpretations of Figure 6A must refer to composite means of the JDI categories of satisfaction as well as to relative proportions of employees in each individual library which score above these composite means for the JDI satisfaction categories in question.

Library B (Figure 6A) has more employees scoring above composite means of supervision and people than employees scoring above composite means of pay, work, and promotion. The low percentage figure (33.28%) for promotion suggests that this may be a real problem area for Library B. It is possible that employees in Library B are demoralized over the state of affairs as reflected in the promotion policies of Library B. Certainly some attention ought to be directed to this category of job satisfaction.

Library E's (Figure 6A) pattern shows relative strengths in the areas of people, work, and supervision, but some weaknesses in pay and promotion. Again, the data must be interpreted on a relative, not absolute, basis. The benchmark is the composite JDI mean.

Figure 6B restructures the JDI data in a way designed to emphasize the five JDI satisfaction categories. The people category (Figure 6B) shows that Libraries E and B have high proportions of their employees who are satisfied with people (coworkers). This configuration of data would tend to confirm the policies of Library E and Library B, at least in these areas of managerial concern.

Libraries F, D, and A have lesser numbers of satisfied employees on people (Figure 6B), while the extremely low percentage figure (35.10%) for Library C suggests that serious problems exist in this area. The management of Library C may want to consult with the managements of Libraries E and B in order to discover the reasons for the discrepancy in figures. It is possible that Libraries E and B have recently instituted novel personnel policies which have contributed to the high showings in this (people) category of satisfaction.

Supervision (Figure 6B) shows a split of the six libraries into essentially two groups. The first group consists of the high-scoring Libraries C, D, and B. The second group consists of the low-scoring Libraries E, A, and F. The respective supervisory policies of these two groups of libraries should be examined, on a comparative basis, to see if any obvious reasons emerge to account for the diversity of results. It may be that the high-ranking libraries possess well-defined supervisory training programs which the low-ranking libraries lack. If this is the case, then re-evaluation of current supervisory programs of training is certainly in order.

In Figure 6B the patterns of work satisfaction appear to diverge into two separate streams. Libraries C, E, and D, have relatively high percentages of employees satisfied with their work, while Libraries A, F, and B have relatively smaller proportions of employees who assess their work satisfaction favorably. This peculiar structuration of the job satisfaction pattern for work in the six libraries suggests the theory that common forces are at work in Libraries C, E, and D which tend to influence the feelings of employees in the directions indicated in Figure 6B. While the reasons for this polarization of the work (itself) category of job satisfaction may be deeply hidden among the organizational complexities of the six concerned IUC Libraries, it is incumbent upon the respective managements of these libraries to be aware of and to explore the reasons contributing to the current state of affairs in regard to work satisfaction in their libraries. Only by assuming that among the multiplicity of factors impinging upon the work settings of the libraries there can be isolated major or salient factors influencing the job satisfaction patterns to assume the configurations which they, in fact, do

assume can any progress be made in manipulating the patterns to assume the shapes which the managements of the IUC libraries would like to see.

The managements of Libraries C, E, and D should not, however, assume that because they enjoy such a favorable position vis-a-vis Libraries A, F, and B (work category of Figure 6B) that their job is finished. Such a managerial attitude would be shortsighted indeed. For the "fortunes of job satisfaction" can be short-lived entities. It is only too true that the patterns of job satisfaction are fluctuating in nature. Job satisfaction surveys must be planned longitudinally. Cross-sectional surveys of job satisfaction will reveal a snapshot of the "state of managerial affairs" only for one moment in time. The growth of a child is indicated by a series of snapshots. Similarly, the growth of an organization's health in terms of job satisfaction is portrayed by a series of job satisfaction surveys which focus upon the critical areas of job satisfaction.

Administrators of these organizations studied may proceed in a similar manner when analyzing further data in Figure 6B concerning pay and promotion.

Discussion of Departmental Evaluations of Job Satisfaction Levels

Figures 7A and 7B structure the data in yet another way, this time in terms of the departmental organization of one library. Data are compared with the composite means for Library X (N=67).

As mentioned previously, the ultimate significance of managerial studies of job satisfaction depends very heavily upon the initial classifications and categories which are established by the research director for the purposes of analyzing the data. Here, the intuition of the research director must be supplemented by detailed knowledge of the

organizational design of the libraries. For the effectiveness of any organization is linked closely and intimately to the concatenation of organizational entities and their articulation into smoothly functioning units which aid and assist each other in the drive for organizational effectiveness.

Looking at Figure 7A it is evident that variability of data does exist. The levels of job satisfaction fluctuate from department to department. No static pattern will ordinarily obtain in dynamic organizations. By examining the configurations of the shifting patterns a notion can be formed of the overall drift of the data. Certain patterns will emerge. The shape of these patterns will influence the decisions and policies of library management.

Department F (Figure 7A) presents a very odd pattern of job satisfaction to say the least. The employees of Department F are the happiest in Library A. This is shown by their position in the overall listing of departments in Library A. In another article the reasons behind the apparent ascendance of Department F will be fully explored. Suffice it to say here that the reasons behind the success of Department F can be discovered through running correlation and regression studies on the data. These analyses will examine biographical and other study variables to pinpoint those job or individual factors responsible for this happy state of affairs.

In Department F (Figure 7A) 100% of the employees are satisfied with the work involved in their jobs. Moreover, a relatively large proportion (79%) are satisfied with supervision and coworkers (people). However, the picture changes when pay and promotion are considered. Here the level of group satisfaction plunges sharply. Evidently there exist certain

problems in these two areas of work satisfaction. It is interesting to note that Department F has the highest percentage of employees (75%) falling above the composite mean for total job satisfaction.

Department C (Figure 7A) reveals a mixed pattern. Attitudes in this department of Library A vary over a wide spectrum. The strengths of Department C lie in supervision, promotion, and work (itself). The weaknesses appear to be in coworkers (people) and pay. And yet Department C enjoys a relatively large lead in total satisfaction. This pattern is very interesting. No doubt it can be explained by library management on the basis of the peculiar role which is played by Department C in the total organization.

Department B (Figure 7A) presents a pattern which is very similar to Department C, with the exception that people and supervision are interchanged. In Department B, satisfaction with supervision becomes a weakness, whereas it constituted one of the strengths of Department C. The reasons for this inversion of rankings appears to be obscure. Again, the respective managements of Departments C and B will want to consult with each other to discuss possible reasons accounting for this configuration of the data.

The strengths of Department B (Figure 7A) lie in the areas of people, promotion, and work. The weaknesses appear to be in satisfaction with supervision and pay. Also, the total ranking is somewhat low in relation to Departments F and C, although it is higher than the corresponding figures for Departments A, D, and E.

The strengths of Department A (Figure 7A) are in pay and work. The one area of weakness is in promotion. The showings of Department A on supervision and people are quite respectable. The reasons for the satisfaction with pay (100%) should be ascertained, and communicated to all departmental managers.

Department D (Figure 7A) shows areas of strength in people and supervision. Work and promotion are areas of weakness. The area of pay cannot be characterized as a strength or weakness, although its relatively low level suggests that this work category needs to be continuously monitored in the future. It is possible that the trend is downward in pay satisfaction. If longitudinal studies verify this trend, then policies on pay may have to be reevaluated. The management of Department D will want to take a hard look at the reasons behind the low figure cited for total satisfaction (46.14%). It is the second-lowest for the group of six departments.

Department E (Figure 7A) is strong in the areas of work and people. Pay appears to be a neutral category. Weaknesses appear in the areas of promotion and supervision. Also, it appears that Department E has the lowest percentage figure (43.75%) among all the six departments. Although the magnitude of this figure is no cause for alarm, it does suggest that the trend in this area needs to be continuously monitored in future, longitudinal studies.

Discussion of JDI Categories of Job Satisfaction For The Departments of Library X

If the data is rearranged to emphasize the multidimensional nature of job satisfaction some very interesting patterns emerge. The following analysis will explore the implications of the data, as well as comment on the actual data configurations. In the following discussion data for each department is compared with the composite means for Library X (N=67) rather than the composite means for all libraries (N=265).

First, an examination of Figure 7B reveals that work satisfaction is greatest for all six departments of Library X. This is shown by the position of work at the top of the list of JDI categories. In descending order are people, supervision, pay, and promotion. Since promotion satisfaction occupies the

bottom rung of the satisfaction ladder for all six departments it is apparent that there does exist a feeling among employees in Library X that a dead-end situation may obtain. If this analysis is verified, then the promotional policies of Library X should be re-evaluated. In the discussion to follow on the promotion category certain comments and suggestions will be made in regard to the resolution of this problem.

Work satisfaction (Figure 7B) is greatest in Departments F and A. It is relatively less in Departments E, C, and B. Department D manifests a relatively low level of satisfaction with work. The management of Department D will want to examine closely the situation currently obtaining in regard to the constitutive structure of the work setting. When evaluating the reasons underlying the configuration of data for the work category of job satisfaction the department managers of Departments F and A should be consulted since their employees are relatively more satisfied in this category. Similarities and differences existing between Department D, on the one hand, and Departments F and A, on the other hand, will undoubtedly reveal the significant causes for the diversity of data.

People satisfaction (Figure 7B) is highest in Department F. It is relatively high in Departments D, B, and E. It occupies a neutral level in Department A. In Department C, the percentage of employees satisfied with their coworkers is well below the composite average. Since personal intercompetences can often play a major role in determining the level of individual satisfaction with one's peers, the group mean can be strongly influenced by variations in feelings which exist at the departmental level.

Supervision satisfaction (Figure 7B) is a strength of Departments F and C. To a somewhat lesser degree it constitutes a strength of Department D. It apparently is a neutral factor in Department A where the feelings of employees about the quality of their supervision is more ambivalent. Again it should be remembered that any ambivalency in feelings are measured against the total library sample (N=67).

A larger sample might change the rankings, and hence the conclusions, emerging from an assessment of another configuration of the data. Here, we are solely concerned with the implications of the data insofar as it mirrors the assumptions implicit in the finite sampling of a limited number of IUC libraries (N=6). It would be necessary to examine closely the sample data for all fourteen IUC libraries in order to verify the conclusions which are drawn in this study, and which rest upon the data submitted by six libraries only.

Department E (Figure 7B) should examine closely its supervisory policies and practices since the low figure (31.25%) for this department, in relation to the other departments, suggests some causal factors at work which need attention. Those Department E managers closest to the scene will want to research the reasons accounting for the low ranking of Department E in this category of job satisfaction.

Department B (Figure 7B) should be concerned about the trend of the feelings vis-à-vis supervision over the near-future, since it is impossible to determine on the basis of this cross-sectional survey just where it stands in the overall line-up. Although Department B shows a slightly lower figure (47.37%) for supervision, the figure is not so low that it cannot be accounted for on the basis of a temporary aberration solely. It will be necessary to repeat the job satisfaction survey six months or

a year in order to verify the trend as being either up or down. The only rational assumption, at this time, is that it is down. If this, indeed, is the case, then the management of Department B will want to institute action designed to combat the downward trend.

In regard to pay satisfaction Department A (Figure 7B) ranks highest. Department E is neutral with regard to this category. Departments B, D, and C lag behind the other departments in pay satisfaction. Department F has a serious morale problem with pay. If these low feelings vis-à-vis pay are not counter-balanced by high feelings vis-à-vis other categories of job satisfaction it is reasonable to expect trouble in Department F.

The configuration of job satisfaction with respect to promotion (Figure 7B) shows a well-defined dispersion of the data which sharply contrasts the departments in terms of levels of satisfaction with this category of job satisfaction. Departments C and B rank high in promotion, indicating a great deal of strength in these departments with respect to promotion. Departments E and D constitute another grouping which lies below the top-scoring departments, yet above the low-scoring departments. Departments A and F rank the lowest (25%).

Total satisfaction (Figure 7B) shows a smooth dispersion of the data, almost parabolic in shape, stretching from low percentages of employees scoring above the composite total mean, to high percentages above the mean. Department F ranks highest. In descending order are Department C, B, A, D, and E.

It is possible that this configuration of the data will change in the future. Cross-sectional surveys will aid in the determination of static levels of job satisfaction, but for the establishment of dynamic levels

only longitudinal, in-depth studies can suffice to account for varying levels of job satisfaction over time. For this purpose the JDI instrument can be employed to provide a convenient measuring device for gauging the respective levels of job satisfaction among all the categories of the work setting.

Summary and Conclusions

The study of job satisfaction is important in its own right. It holds important implications for managerial performance, managerial development, and organizational development. In the past twenty years, the relationship between employee satisfaction and employee productivity on the job has been reexamined. One does not necessarily cause the other. Each does impinge upon organizational effectiveness, however, and much research is needed in each area. This study concentrated upon job satisfaction. Six organizations in one metropolitan area were studied. These organizations (libraries) have a common technology. Patterns of satisfaction were indexed. Similar patterns were found to exist.

This study emphasized certain universal principles inherent in job satisfaction theory. The work setting in the library exhibits many of the features common to all work environments. A complex network or system of forces exists in the 1UC consortium of university libraries. These forces exhibit certain psychological patterns. Employee behavior is strongly influenced by these psychological patterns or feelings which employees have about their jobs. Viewed in the aggregate these feelings can be captured, in their total essence, by the job researcher. By examining the configurations or patterns which the job satisfaction dimensions assume in each library, and by further examining the total patterns in

terms of comparative analysis it is possible to establish certain generalizations which can powerfully assist the IUC consortium library managements in short-range and long-range decision-making.

Furthermore it is possible, through comparative analysis of the JDI job satisfaction data, to detect long-term trends in the patterns of psychological forces impinging upon the library work settings which could conceivably constitute the source of managerial problems in the future. Through continuous monitoring of job satisfaction data library management can keep its finger on the pulse of its employees' feelings about their jobs; appropriate managerial action can be applied in those critical areas of concern as revealed in the intricate patterns of job satisfaction.

One of the greatest values to be derived from satisfaction surveys is the obvious control which such knowledge gives to management. The consequences of employees' feelings are of prime concern to management in the IUC libraries. There is one set of psychological forces tending to keep an employee on the job. There is another set tending to separate the employee from his job. The patterns of forces are not the same for each employee. This results from the fact that each employee possesses a unique set of value priorities. One man's fish is another man's poison.

By applying statistical procedures to process the data it is feasible and possible to make summary statements or generalizations about the order of priorities which the employees, as a group, place upon the job dimensions constituting their work environment. It will be the purpose of future articles to delineate, in fuller and more complete detail, the aggregative nature of job satisfaction surveys. By exposing the data to critical analysis overall trends and implications for managerial action and reaction can be reliably predicted.

The goal remains constant: to predict the behavior of employees and, by anticipating such behavior, to more effectively utilize the human resources at the disposal of the IUC library managements. The ultimate goal is two-fold: 1) to increase the understanding of employees and their supervisors in regard to the reasons underlying current management policies and practices; 2) to increase long-term understanding of the meanings and implications for managerial policy and practice of basic research in the field of job satisfaction.

For it still remains true that a theory of job satisfaction is still in the formative stages of development. Much work has been done. Much work remains to be done. This study of job satisfaction in six on-going organizations will extend one frontier of knowledge impinging upon a satisfactory theory of job satisfaction by calling attention to the multiplicity of patterns of job satisfaction possible in differing organizations with similar technology. Future articles will examine basic concepts and principles in greater detail.

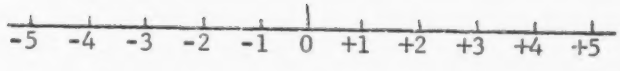


Figure 1. A Hypothetical Scale for Measuring Job Satisfaction

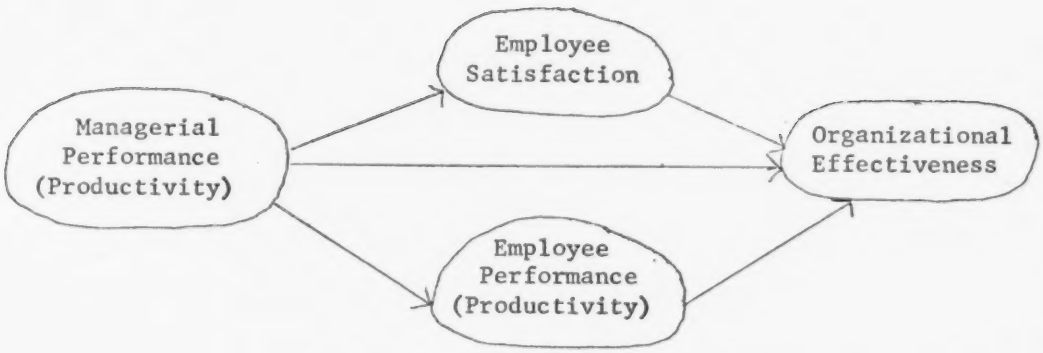
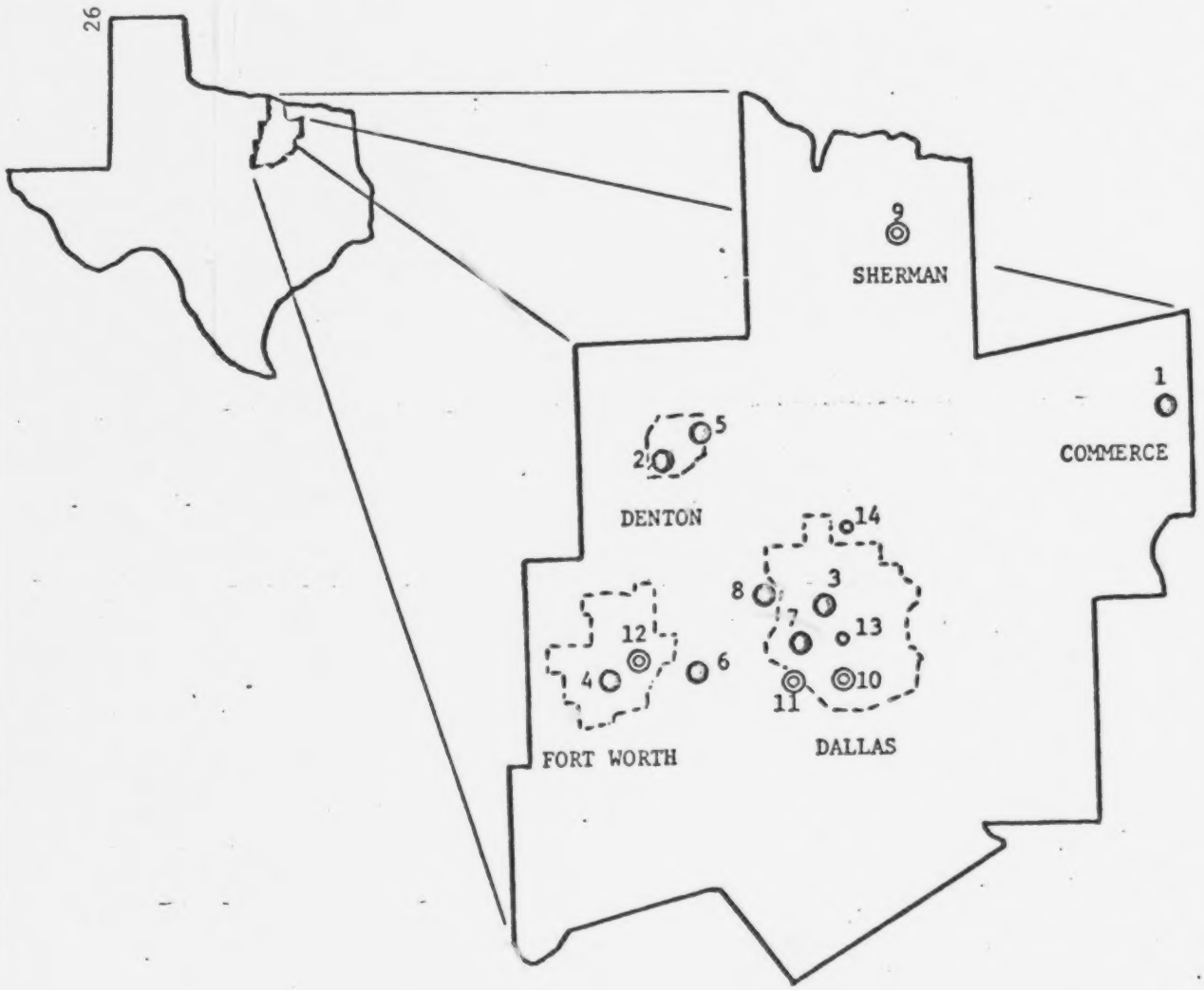


Figure 2. The Theoretical Model

University	No. of full-time Employees	No. Participating in Research Study
University of Texas (Arlington)	65	56
North Texas State University	106	67
Southern Methodist University	64	51
Texas Christian University	50	37
University of Dallas	8	6
East Texas State University	48	48
TOTAL	341	265

Figure 3A. Characteristics of Sample Organizations Comprising the Universe of This Study

Figure 3B. Interuniversity Council of the North Texas Area



10 COUNTIES IN NORTH CENTRAL TEXAS

CONSTITUENT INSTITUTIONS:

CORPORATE INSTITUTIONS: ○

1. East Texas State University
2. North Texas State University
3. Southern Methodist University
4. Texas Christian University
5. Texas Woman's University
6. The University of Texas at Arlington
7. The University of Texas Southwestern Medical School
8. University of Dallas

MEMBER INSTITUTIONS: ◎

9. Austin College
10. Bishop College
11. Dallas Baptist College
12. Texas Wesleyan College

AFFILIATE MEMBER INSTITUTIONS: ○

13. Baylor University College of Dentistry
14. The University of Texas at Dallas

Figure 4. The Job Descriptive Index (JDI)*

Work

Y	Fascinating
N	Routine
Y	Satisfying
N	Boring
Y	Good
Y	Creative
Y	Respected
N	Hot
Y	Pleasant
Y	Useful
N	Tiresome
Y	Healthful
Y	Challenging
N	On your feet
N	Frustrating
N	Simple
N	Endless
Y	Gives sense of accomplishment

Supervision

Y	Asks my advice
N	Hard to please
N	Impolite
Y	Praises good work
Y	Tactful
Y	Influential
Y	Up-to-date
N	Doesn't supervise enough
N	Quick-tempered
Y	Tells me where I stand
N	Annoying
N	Stubborn
Y	Knows job well
N	Bad
Y	Intelligent
Y	Leaves me on my own
Y	Around when needed
N	Lazy

People

Y	Stimulating
N	Boring
N	Slow
Y	Ambitious
N	Stupid
Y	Responsible
Y	Fast
Y	Intelligent
N	Easy to make enemies
N	Talk too much
Y	Smart
N	Lazy
N	Unpleasant
N	No privacy
Y	Active
N	Narrow interests
Y	Loyal
N	Hard to meet

Pay

Y	Income adequate for normal expenses
Y	Satisfactory profit sharing
N	Barely live on income
N	Bad
Y	Income provides luxuries
N	Insecure
N	Less than I deserve
Y	Highly paid
N	Underpaid

Promotions

Y	Good opportunity for advancement
N	Opportunity somewhat limited
Y	Promotion on ability
N	Dead-end job
Y	Good chance for promotion
N	Unfair promotion policy
N	Infrequent promotions
Y	Regular promotions
Y	Fairly good chance for promotion

*Copyrighted 1962 by Patricia Cain Smith. For further information about the JDI see Patricia Cain Smith, Lorne M. Kendall, Charles L. Hulin, The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes, Chicago: Rand McNally & Company, 1969. Permission to use the JDI must be obtained from Patricia Cain Smith.

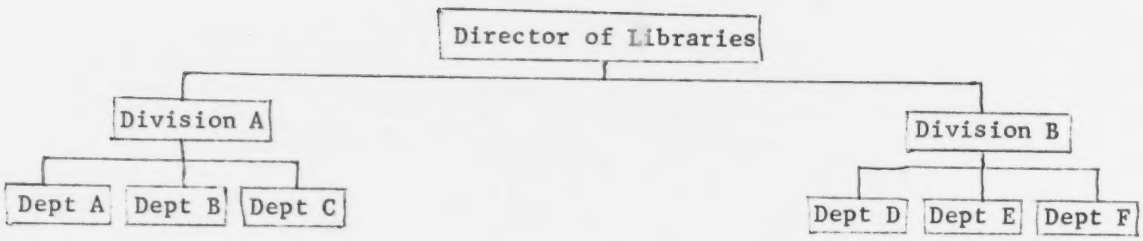


Figure 5. Organization Chart of Library X

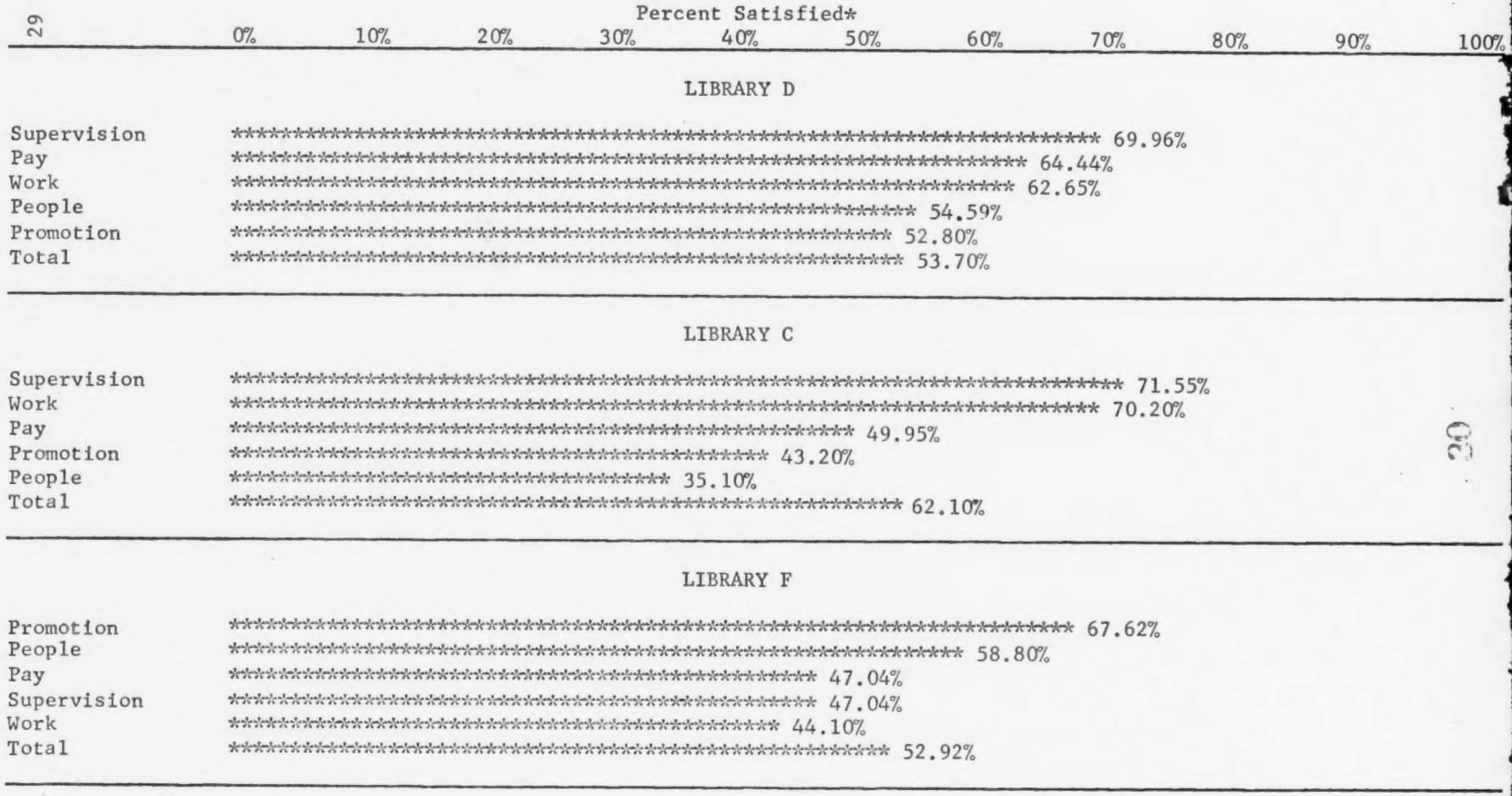


FIGURE 6A. COMPARATIVE ANALYSIS OF JOB SATISFACTION IN SIX LIBRARIES, USING LIBRARY SUBGROUPING AS THE PRINCIPLE OF STRATIFICATION

*Derived by computing the proportion of employees scoring above the following composite JDI (Component) means: JDI (Work)= 34.5312; JDI (Pay)=14.6811; JDI (Promotion)=12.2687; JDI (Supervision)=42.9152; JDI (People)=42.667; JDI (Total)=147.5970. (N=265 for composite sample of 6 libraries.)

Note 1--The libraries are arranged in descending order of overall job satisfaction, i.e., Library D had the greatest overall job satisfaction, while Library E had the least. These relative rank orders were obtained by integrating the areas under the density functions defining the job satisfaction levels for the six JDI categories.

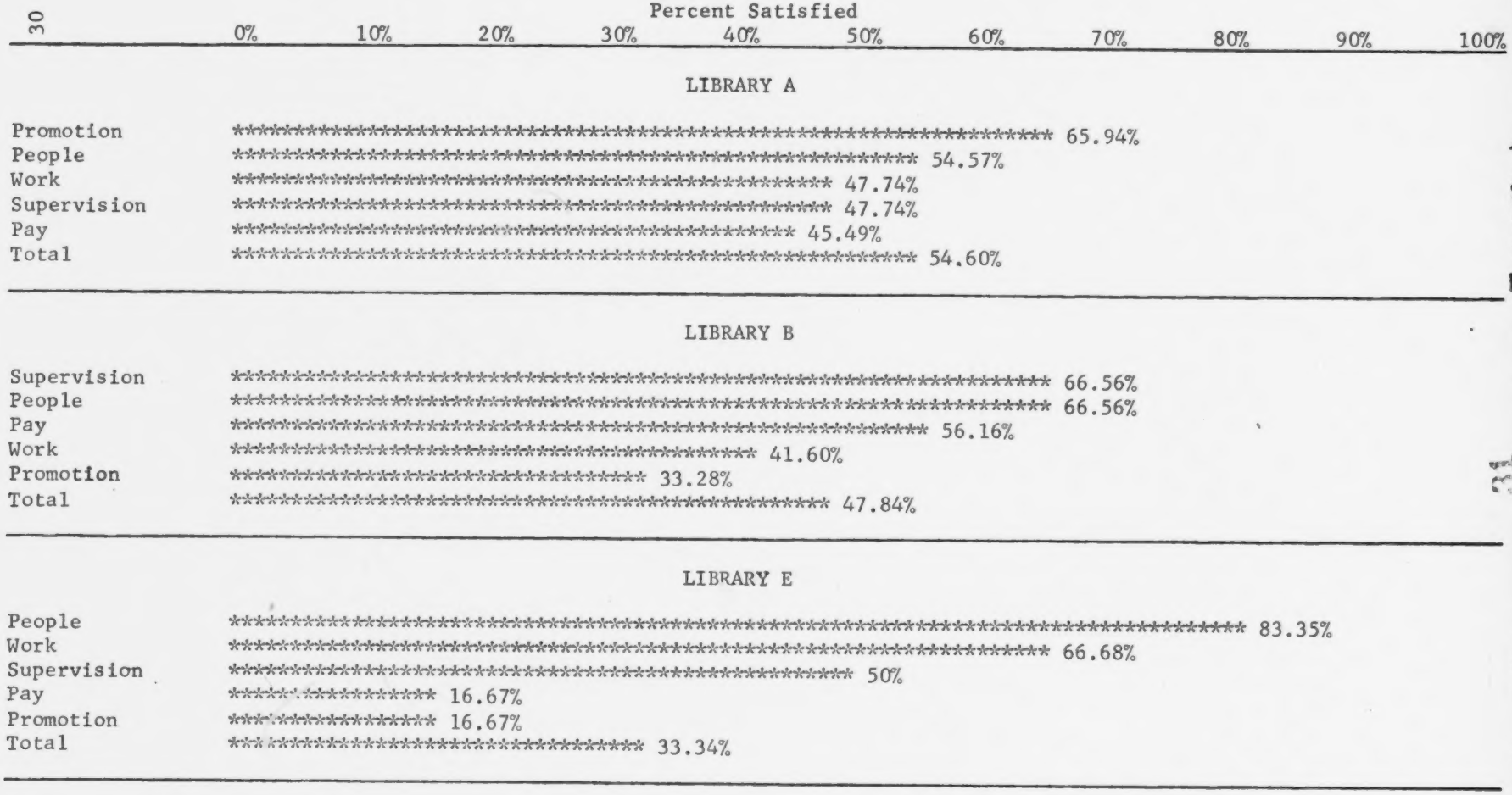


FIGURE 6A. (CONTINUED) COMPARATIVE ANALYSIS OF JOB SATISFACTION IN SIX LIBRARIES, USING LIBRARY SUBGROUPING AS THE PRINCIPLE OF STRATIFICATION

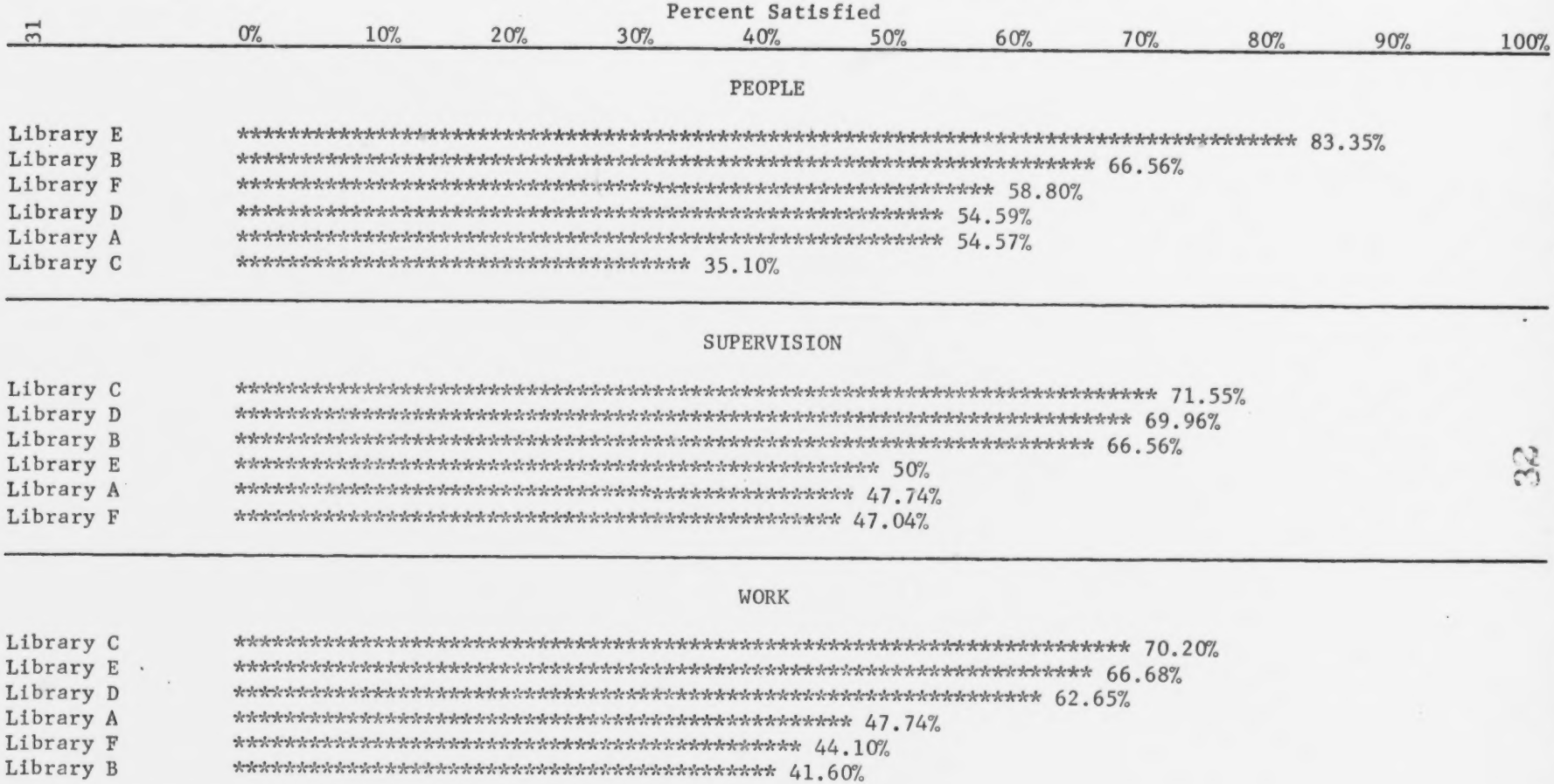


FIGURE 6B. COMPARATIVE ANALYSIS OF JOB SATISFACTION IN SIX LIBRARIES, USING THE SIX JDI DIMENSIONS AS THE PRINCIPLE OF STRATIFICATION

Note 1--The JDI (Component) categories are arranged in descending order of magnitude, i.e., people satisfaction was greatest for all six libraries, while promotion satisfaction was least. These relative rank orders were obtained by integrating the areas under the density functions defining job satisfaction levels for the six libraries.

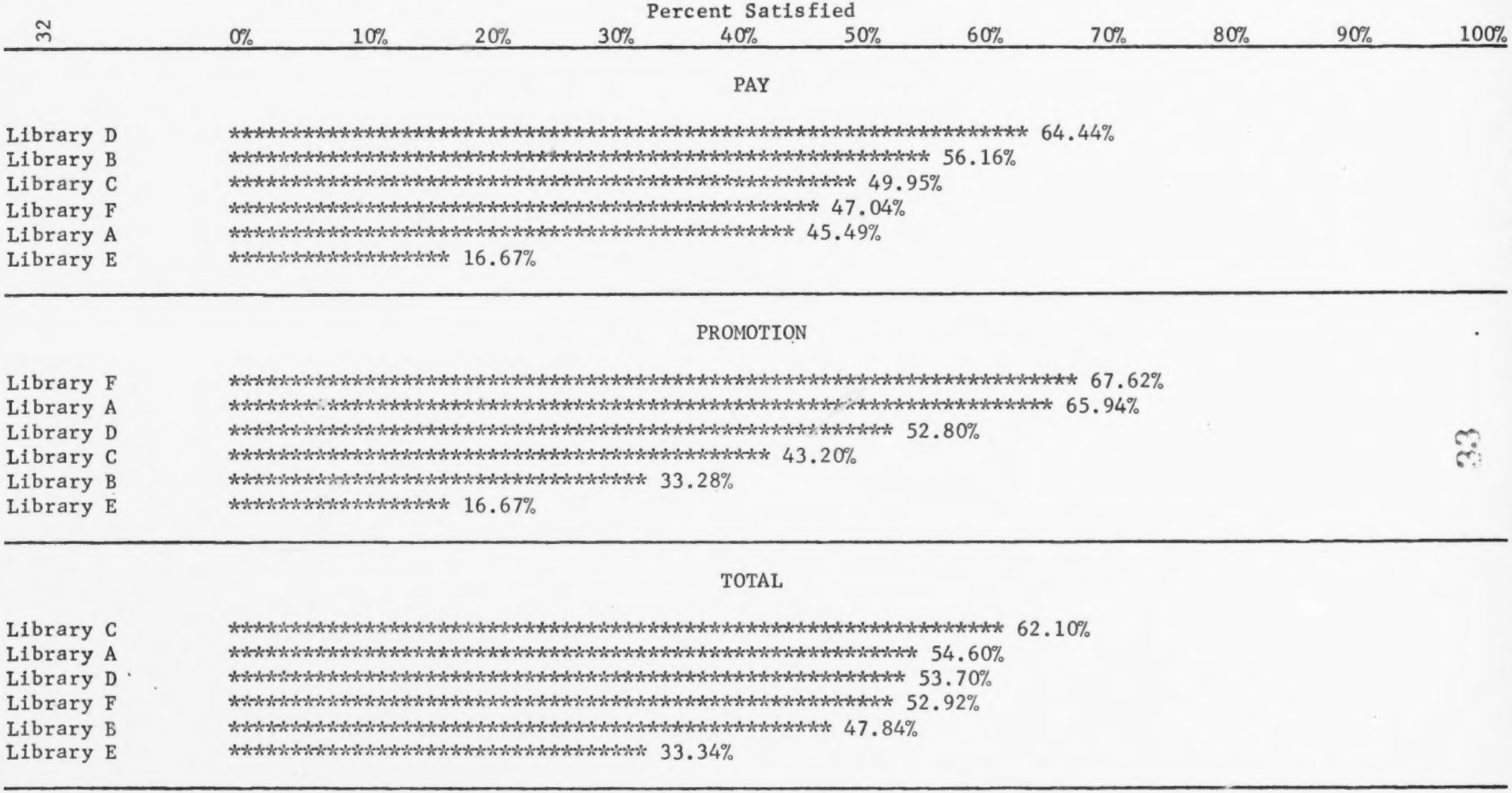


FIGURE 6B. (CONTINUED) COMPARATIVE ANALYSIS OF JOB SATISFACTION IN SIX LIBRARIES, USING THE SIX JDI DIMENSIONS AS THE PRINCIPLE OF STRATIFICATION

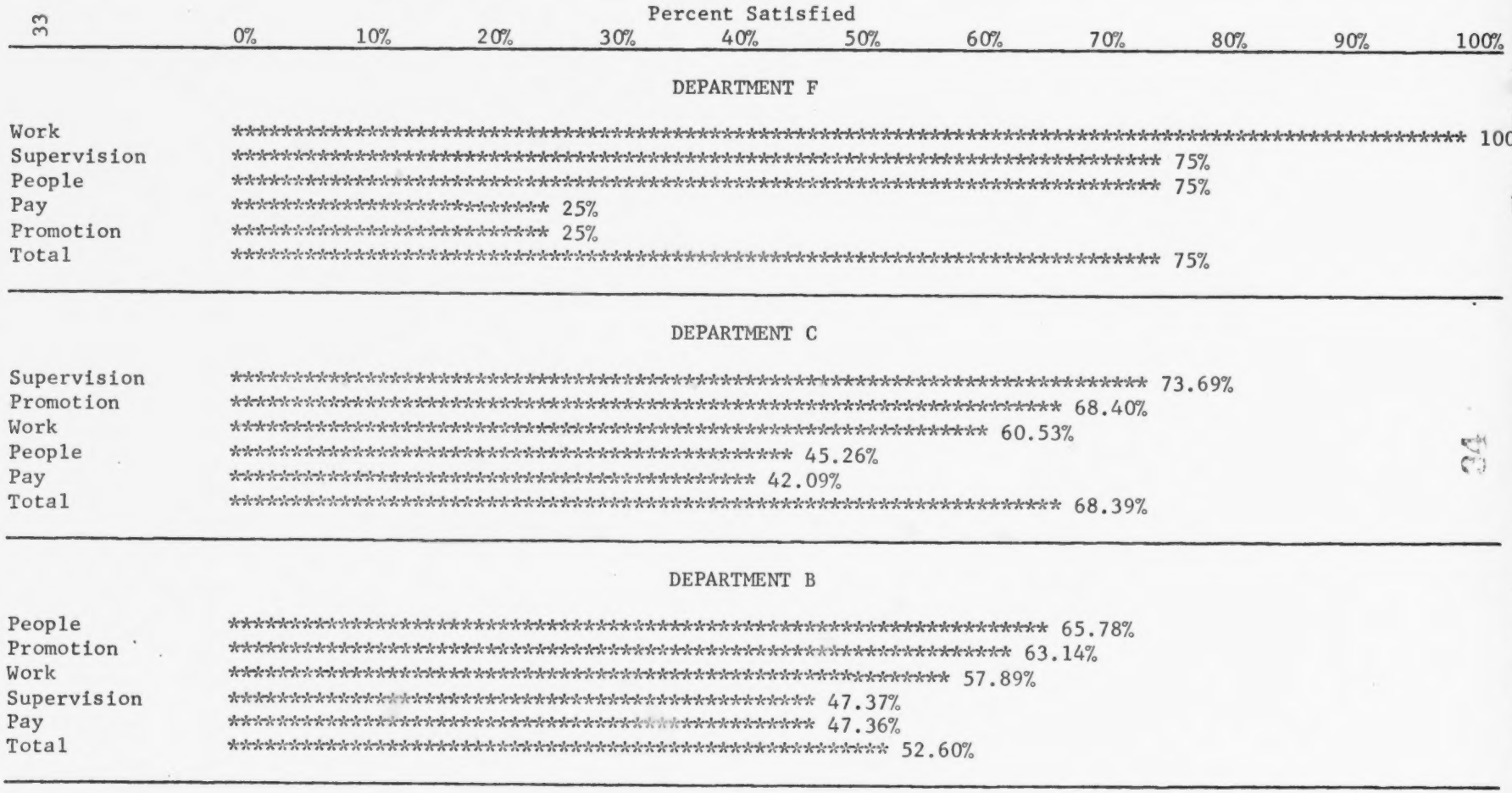


Figure 7A. LIBRARY X COMPARATIVE ANALYSIS OF JOB SATISFACTION IN SIX JDI (COMPONENT) CATEGORIES, USING LIBRARY X DEPARTMENTS AS THE PRINCIPLE OF STRATIFICATION

Note 1--The departments are arranged in descending order of overall levels of job satisfaction, i.e., Department F has the highest level, while Department E has the least. These relative rank orders were obtained by integrating the areas under the density functions defining job satisfaction levels for the five JDI dimensions.

Percent Satisfied

	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

DEPARTMENT A

Pay	********** 100%
Work	********** 75%
Supervision	********** 50%
People	********** 50%
Promotion	********** 25%
Total	********** 50%

DEPARTMENT D

People	********** 69.21%
Supervision	********** 61.53%
Pay	********** 46.14%
Work	********** 34.56%
Promotion	********** 30.76%
Total	********** 46.14%

DEPARTMENT E

Work	********** 62.50%
People	********** 62.50%
Pay	********** 50%
Promotion	********** 37.50%
Supervision	********** 31.25%
Total	********** 43.75%

Figure 7A. (CONTINUED) LIBRARY X COMPARATIVE ANALYSIS OF JOB SATISFACTION IN SIX JDI (COMPONENT) CATEGORIES, USING LIBRARY X DEPARTMENTS AS THE PRINCIPLE OF STRATIFICATION

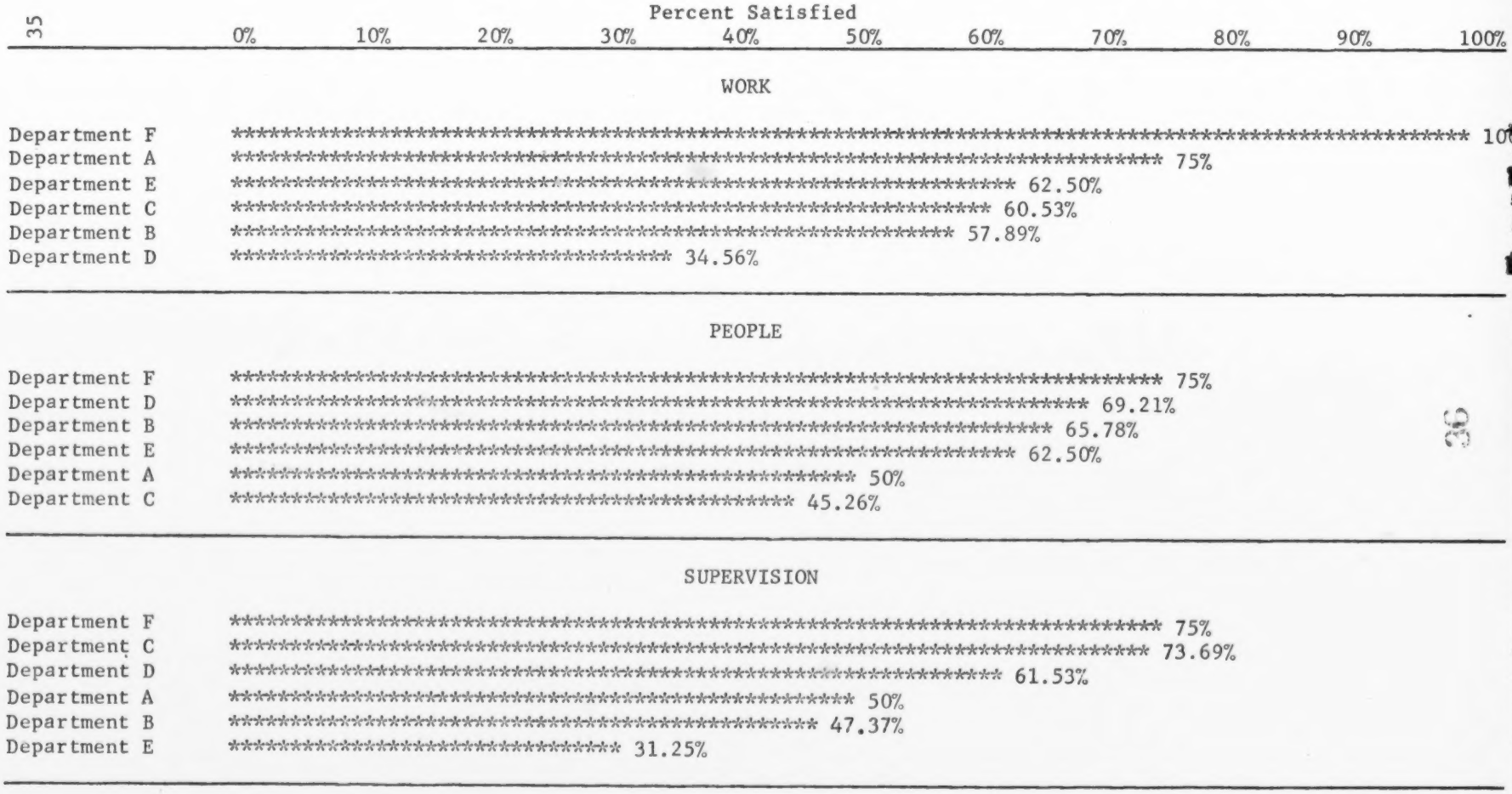


FIGURE 7B. COMPARATIVE ANALYSIS OF JOB SATISFACTION IN SIX DEPARTMENTS OF LIBRARY X, USING JDI (COMPONENT) AS THE PRINCIPLE OF STRATIFICATION

Note 1--The JDI (Component) categories of job satisfaction are arranged in descending order of relative rank order, i.e., work satisfaction was greatest, while promotion satisfaction was least. These relative rankings were obtained by integrating the areas under the density functions defining job satisfaction levels for the five JDI dimensions.

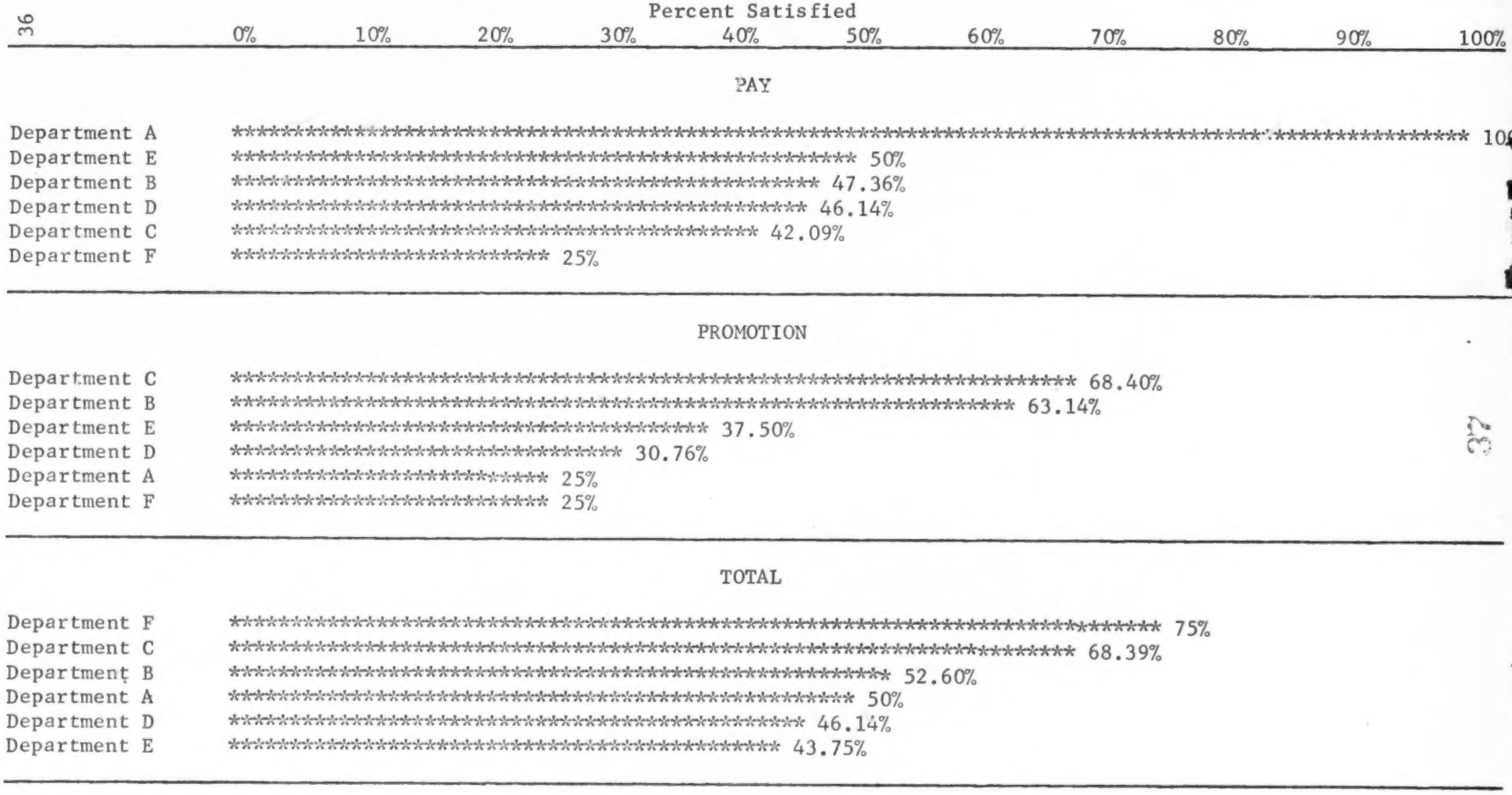


FIGURE 7B. (CONTINUED) COMPARATIVE ANALYSIS OF JOB SATISFACTION IN SIX DEPARTMENTS OF LIBRARY X, USING JDI (COMPONENT) AS THE PRINCIPLE OF STRATIFICATION